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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/933,250	08/20/2001	Shigetoshi Kawabe	KON-1671	5524
20311	7590	03/02/2004	EXAMINER	
MUSERLIAN AND LUCAS AND MERCANTI, LLP 475 PARK AVENUE SOUTH NEW YORK, NY 10016			EASHOO, MARK	
			ART UNIT	PAPER NUMBER
			1732	

DATE MAILED: 03/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/933,250

Applicant(s)

KAWABE, SHIGETOSHI

Examiner

Mark Eashoo, Ph.D.

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. (US Pat. 5,670,214).

Regarding claims 1 and 3: Saito et al. teaches the claimed process of extrusion coating a web-shaped substrate, comprising: conveying a substrate (Fig. 2); supporting the substrate by contact of a first side of the substrate with a back-roll (Fig. 2); simultaneously extruding two layers onto a second side of the substrate, wherein the layers are superimposed (Fig. 2); and a viscosity ratio of  $V_b/V_a = 2.0$ .

The viscosity ratio in Saito et al. may be determined by the ratio of the lower layer viscosity ( $V_a$ ) and of the upper layer viscosity ( $V_b$ ). The values in Table 3 of Saito et al. exhibit a viscosity ratio of  $V_b/V_a = 2.0$ .

However, Saito et al. does not explicitly teach  $2.5 \leq V_b/V_a \leq 30$ . However, Saito et al. clearly teaches, based upon their experiments, that high-speed coating of a thin layer is possible by reducing viscosity (2:50-65). Furthermore, the data shown in Table 2 shows a trend that suggests as the viscosity of the lower layer is lowered, while the upper layer viscosity is held constant, then marginal film thickness can be decreased. It is noted that Saito et al. does not teach or suggest the lower limit of this viscosity which causes coating failure (ie. no experimental data is shown wherein the coating process fails because of too low of a lower layer viscosity). Therefore, a person having ordinary skill in the art would have found it obvious to have optimized the lower limit of the viscosity of the lower layer through routine experimentation, as commonly practiced in the art, in the process of Saito et al., and would have been motivated to do so in order to produce a desired thin coating layer at high production speeds. Since, Saito et al. directly

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teaches a viscosity ratio of  $V_b/V_a = 2.0$ , one of ordinary skill in the art would have expected a reasonable chance of success at least within the lower limits of the range,  $2.5 \leq V_b/V_a \leq 30$ .

Regarding claims 2 and 4: Saito et al. teaches an upper layer thickness ( $T_b$ ) of 15  $\mu\text{m}$  and a lower layer of thickness ( $T_a$ ) of 10  $\mu\text{m}$  (see Table 3), which yields a  $T_b/T_a = 1.5$ . Therefore the ratio of  $\{V_b/V_a\} / \{T_b/T_a\}$  is 1.33 (ie. lower than 7.5).

Regarding claim 5: Saito et al. teaches upper and lower layers using the same solvents and suggests that the lower layer is a pre-coating layer not containing a solid ingredient (ie. infinitely dilute) (2:15-20 and 3:35-60).

Regarding claims 6 and 7: Saito et al. teaches upper layer viscosities of 12 cP or 0.012 Pa.s. (see Table 2).

### ***Response to Arguments***

Applicant's arguments filed 16-JAN-2004 have been fully considered but they are not persuasive, because:

Applicant's arguments allege that the claims are patentable over Saito et al. because Saito et al. does not teach increasing the ratio of  $V_b/V_a$  to 2.5 or above. The Examiner agrees that Saito et al. does not directly teach increasing the ratio of  $V_b/V_a$  to 2.5 or above, accordingly, there is no rejection under 35 USC § 102.

Nonetheless, Applicant's argument fails to discuss the obviousness of the range as set forth in the rejection. the overall teachings of Saito et al. include: 1.) "it became understood from the experiments by the inventors of the present invention that high-speed coating became possible by reducing the viscosity" (2:54-56); and 2.) "As mentioned above, it became obvious that coating of a thin film, even if the film to be constructed is of a single layer or a multi-layer structure, is possible by controlling the physical properties of the coating solution to be coated adjacent to the structure" (3:36-40, emphasis added). It is noted that the 'physical properties' to which is refer to by Saito et al. is inclusive of viscosity (3:2-26). It is well settled that a *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 227 USPQ 773 (Fed. Cir. 1985). As set forth in the rejection, Saito et al. does not teach or suggest the lower limit of this viscosity which causes coating failure (ie. no experimental data is shown wherein the coating process fails because of to low of a lower layer viscosity). Therefore, it is maintained that a person having ordinary skill in the art would have found it obvious to have optimized the lower limit of the viscosity of the lower

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layer through routine experimentation, as commonly practiced in the art, in the process of Saito et al., and would have been motivated to do so in order to produce a desired thin coating layer at high production speeds (ie. economic benefit). Since, Saito et al. directly teaches a viscosity ratio of  $V_b/V_a = 2.0$ , one of ordinary skill in the art would have expected a reasonable chance of success at least within the lower limits of the range,  $2.5 \leq V_b/V_a \leq 30$ .

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

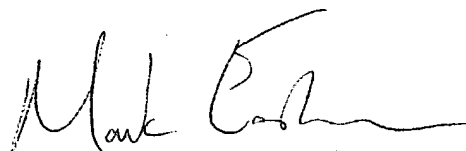
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Eashoo, Ph.D. whose telephone number is (571) 272-1197. The examiner can normally be reached on 7am-3pm EST, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Mark Eashoo, Ph.D.  
Primary Examiner  
Art Unit 1732

2/24/04  
me